CHAPTER **1**

The Dilemma of Our Times: Life Span Physical Activity and the Obesity Health Crisis

Questions

- **What physical activity opportunities did you have growing up?**
- **Did you enjoy physical activity?**
- **How have things changed as you've gotten older?**

Objectives

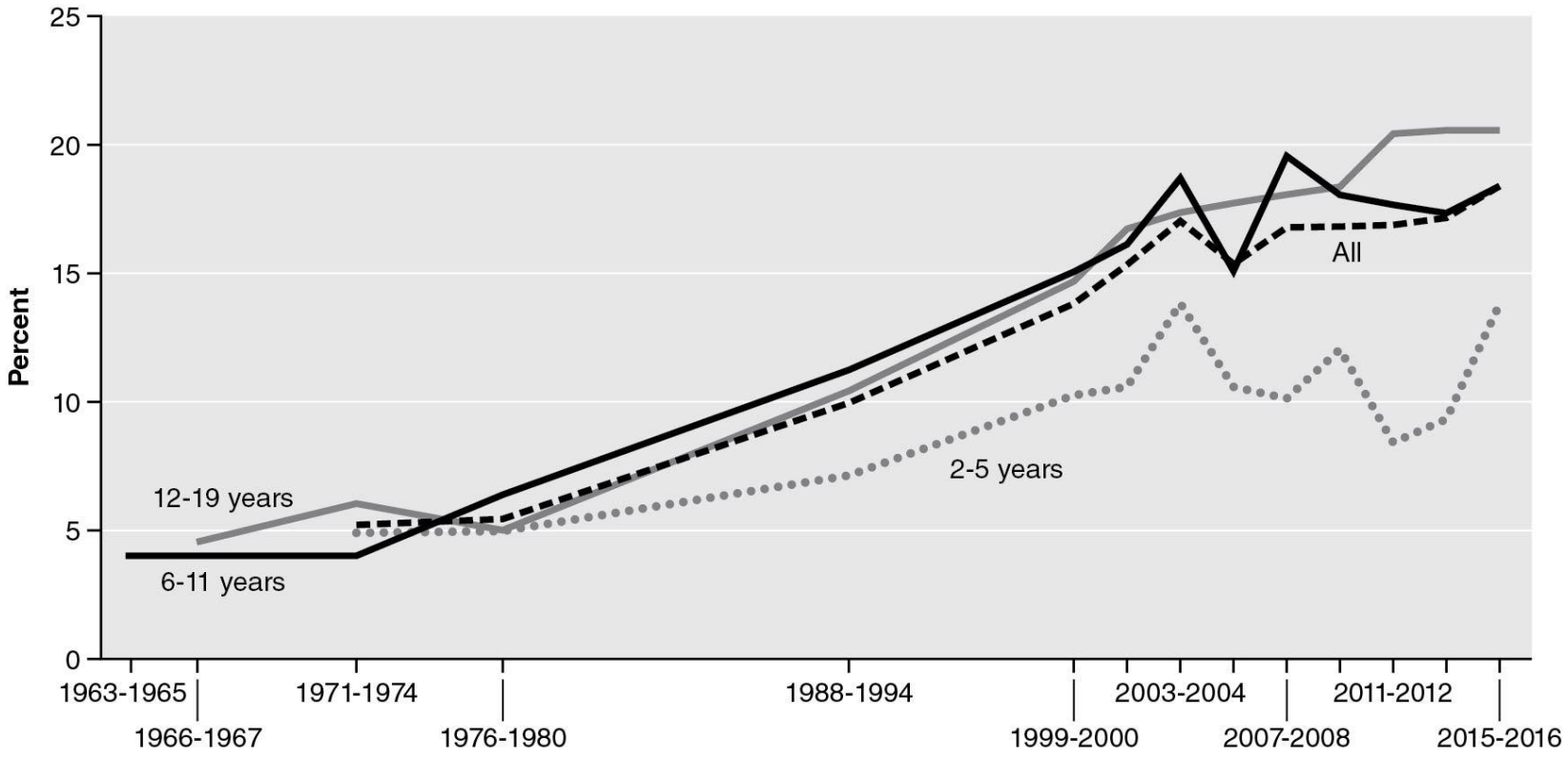
- **Introduce and review concepts related to obesity.**
- **Explore physical activity recommendations.**
- **Discuss approaches to promote and increase physical activity participation across the life span.**

Prevalence and Danger of Obesity

- **Prevalence of obesity has been steadily increasing.**
  - **BMI ≥ 95th percentile**
  - **Energy intake > energy expenditure**
  - **More calories and less activity**

- **Obesity increases risk of disease and premature mortality.**

Figure 1.1



Reprinted from Fryar, Carroll, and Ogden (2018a).

Determinants of Obesity

- **Increases in energy intake (calories in)**
  - **Consumption of energy-dense, low-nutrient foods (fast food, packaged snacks, sugar-sweetened beverages)**
- **Decreases in energy expenditure (calories out)**
  - **Reduced physical activity due to the following:**
    - **Increased screen time**
    - **Reduced recreational physical activity**
    - **Reduced active transportation**
- **Socioeconomic status**
  - **Poverty, education, geography, race or ethnicity can increase risk.**

Health Risks of Obesity

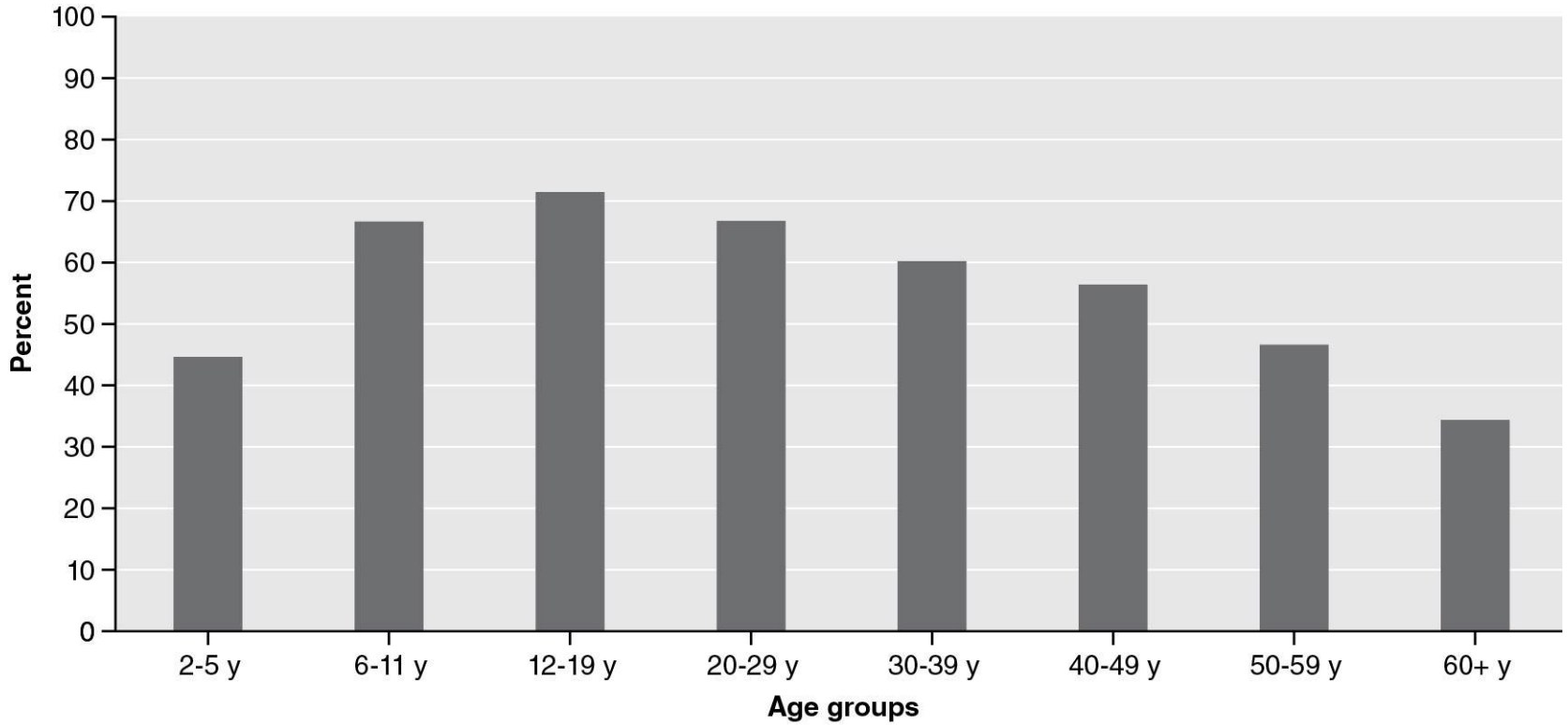
- Sleep apnea and respiratory problems
- Liver and gallbladder disease
- Cancer
- Osteoarthritis
- Stroke
- Coronary heart disease
- Type 2 diabetes
- Reproductive health complications

Changes to the Food Environment

- **High intake of sugar-sweetened beverages**

- **Frequent consumption of fast food**
  - **About one-third of adults eat fast food daily (Dugan, 2013)**
  - **High exposure to media advertising**
  - **Less expensive and more accessible**

Figure 1.2



Data from Healthy Food America (2017a).

School Wellness

- Growing concern over increasing health risks in school-aged youth
  - Decreased physical activity
  - Dietary changes
- Federal government programs to support school wellness
  - Free or reduced lunch
  - School wellness councils
- State mandates for physical education and food availability
- Questions remain regarding accountability and enforcement.

Costs Associated With Obesity

- **Direct costs:** **treatments, hospitalizations, medications**
- **Indirect costs:** **loss of productivity, time spent caregiving**
- **Estimates of direct costs to treat obesity:** **$147-210 billion per year (e.g., Cawley & Meyerhoefer, 2012; Finkelstein et al., 2009)**
- **Question:** **Is it more expensive to treat or prevent obesity?**

National Efforts to Increase Physical Activity

- **Healthy People 2000**
  - **National strategy to deal with broad aspects of public health**
  - **Includes goals and evaluation of progress based on previous report**
  - **Updated every 10 years (current edition Healthy People 2030)**
- **National Physical Activity Plan**
  - **Explore and recommend solutions across wide domains**
    - **Schools, parks, transportation**
- **U.S. report card: D−**

Activity

- **Discuss the determinants of obesity. Why are some people at greater risk?**
- **What are the health risks of obesity? What are the costs?**
- **What is the purpose of having national strategies to improve public health?**
- **Discuss why national plans to promote health and physical activity may fall short.**

Summary

- **Obesity is a multifactorial disease with physical, psychological, and environmental determinants.**
- **The costs associated with obesity are increasing over time.**
- **National public health efforts are being made to promote more physical activity and healthy eating.**

- **Tasks/Assignments:**
- **Next Class:**